

What is claimed is:

1. A method of producing secretory Ig molecules comprising transfecting a cell producing an Ig with a polynucleotide encoding secretory component (SC) to form SC transfected Ig producing cells.
- 5 2. The method of claim 1, further comprising collecting a supernatant produced by the cell.
3. The method of claim 2, further comprising purifying sIg from the supernatant.
4. The method of claim 1, wherein the secretory Ig and SC are derived from the same species.
- 10 5. The method of claim 1, wherein the secretory Ig and SC are derived from different species.
6. The method of claim 1, wherein the SC comprises the amino acid sequence shown in SEQ ID NO:4 or a congener thereof.
7. The method of claim 1, wherein the cell endogenously produces Ig.
- 15 8. The method of claim 1, wherein the cell is genetically modified to produce Ig.
9. The method of claim 1, wherein the cell is a mammalian, avian, insect, bacterial or yeast cell.
10. The method of claim 9, wherein the mammalian cell is a human, rabbit, murine, rat or bovine cell.
- 20 11. The method of claim 1, wherein the cell is a myeloma cell, CHO cell, L cell, COS cell, fibroblast, MDCK cell, HT29 cell or a T84 cell.
12. The method of claim 1, wherein the Ig molecule is an IgA.
13. The method of claim 1, wherein the Ig molecule is a domain-modified IgA.

14. A secretory IgA produced by the method of claim 1.

15. A pharmaceutical composition comprising the secretory IgA of claim 14 and a pharmaceutically acceptable carrier.

16. A method of preventing infection in a subject comprising administering the composition of claim 15 to the subject.

5 17. The method of claim 16, wherein the infection is systemic or at a mucosal surface.

18. The method of claim 16, wherein the infection is a bacterial, viral, mycoplasmal, mycobacterial, yeast or parasitic infection.

19. The method of claim 18, wherein the viral infection is with a human immunodeficiency virus, respiratory syncytial virus, flu virus or cold virus.

10 20. The method of claim 16, wherein the subject is a mammal, bird or fish.

21. The method of claim 20, wherein the mammal is a human.

22. A method of treating an infection in a subject comprising administering the composition of claim 15 to the subject.

15 23. The method of claim 22, wherein the infection is systemic or at a mucosal surface.

24. The method of claim 22, wherein the infection is a bacterial, viral, mycoplasmal, mycobacterial, yeast or parasitic infection.

25. The method of claim 24, wherein the viral infection is a human immunodeficiency virus, respiratory syncytial virus, flu virus or cold virus infection.

20 26. The method of claim 22, wherein the subject is a mammal, bird or fish.

27. The method of claim 26, wherein the mammal is a human.